

GORSKA, R.; JANKOWSKA, E.

The effect of deafferentation on the instrumental conditioned reflexes established in dogs by reinforcing passive movements. In English. Bul Ac Pol biol 8 no.9:527-530 '60. (EEAI 10:7)

1. Department of Neurophysiology, Nencki Institute of Experimental Biology, Polish Academy of Sciences. Presented by J. Komoraki.
(CONDITIONED RESPONSE)

1ST AND 2ND CDR(S)		PROCESSING AND PROPERTIES INDEX	
<p><i>CR</i></p> <p>The chemical nature of jet. N. A. Orlov and A. I. Gorkhaya. <i>Russ. Tsvetnoye Topivo</i> 5, 414-17(1934).— The chem. properties of jet are: ash content 0.94% and S 1.34%. The ash is composed of: SiO_2 24.69, TiO_2 0.68, Fe_2O_3 59.96, Al_2O_3 4.56, CaO 2.10, MgO 1.90, MnO 0.07 and SO_2 2.71%. It contains volatile substances 55.36, coke 44.64% and its upper calorific value is 8983 cal. The ultimate analysis of the organic mass yields: C 82.43, H 6.31, N 1.03 and O + S 10.23%. Distn. from an Al retort produces: semicoke 56.5, tar 30.0, H_2O 6.0 and gases 7.5%. The gas contains: H_2 8.5, CO 3.0, C_2H_4 3.7, CO_2 8.1, H_2S 11.1, C_2H_6 62.4, residue 3.2%. The tar analyzed by the Stastnikov method discloses: free C 1.83, bases 0.80, acids 3.05, liquid phenols 18.02, solid phenols 25.0, asphaltenes 3.72, oils 31.53 and tars (resins) 15.05%. A. A. Bochtlinak</p>		8	
		<p>ASB-3LA METALLURGICAL LITERATURE CLASSIFICATION</p>	
<p>25000 57000000</p>		<p>25000 57000000</p>	
<p>25000 57000000</p>		<p>25000 57000000</p>	

1ST AND 2ND COLUMNS		3RD AND 4TH COLUMNS		5TH AND 6TH COLUMNS	
CA				8	
<p>Now data on the carbohydrate theory of the origin of petroleum. N. A. Orlov, A. I. Gorskaya and O. A. Radchukho. <i>Khim. Tverdogo Topliva</i> 6, 605-19 (1935).—An investigation of the expl. data of Beil on a natural material (brown algae). Algae were asphaltized in a rotating autoclave by treatment with 11.25 N Na₂CO₃ at 330° for 3 hrs. The product of asphaltization was further hydrogenated under high pressure, with AlEt₃ + AlEt₂Cl catalyst. The product of hydrogenation yields a considerable amt. of paraffin hydrocarbons, which are formed from some non-bituminous groups. The expl. illustrates the process of petroleum formation under lab. conditions as a method of the transformation of org. substances into petroleum under natural conditions. Twenty-seven references.</p> <p>A. A. Podgoray</p>					
<p>AS 55.55 METALLURGICAL LITERATURE CLASSIFICATION</p>					

104 22

The presence of porphyrins in bitumen. V. A. Uspe-
skii and A. I. Gorskaya. *Prirada* 27, No. 7-8, 15-20
(1988); *Chem. Zvesti* 1989, 1, 2002. -- After a discussion of
the literature on the porphyrin content of petroleum,
bitumen and coal and more recent ideas regarding the
origin of petroleum, results of tests on petroleum samples
from Fergana and Tadzhikistan (Haudak) are reported.
These petroleum, especially that from Haudak, are very
rich in porphyrins; they are high in S and spectroscopic
analysis shows them to contain vanadin-porphyrin com-
plexes. M. G. Moore

ALSO SEE METALLURGICAL LITERATURE CLASSIFICATION

PROCESSING AND PROPERTIES INDEX																																																																													
<p><i>ca</i></p> <p>The origin of the Baikal bitumens. V. A. Uspenski and A. I. Gorskaya. <i>Trudy Neftyanogo Geol.-Razved. Inst.</i> 1940, No. 8: 21-30; <i>Khim. Referat. Zhur.</i> 1940, No. 9, 14. --The low content of S, N and O are the common characteristics of the bitumens investigated. Some specimens were very rich in paraffin. The content of C varied from 79.81 to 87.04%, that of H from 10.00 to 11.56%. The content of asphaltene did not exceed 3.50, except in 2 strongly weathered specimens, which contained up to 22.80% of asphaltene. Analyses show that these bitumens are entirely different from the org. substance of the tertiary minerals. No definite conclusions are made, owing to the insufficient amt. of data available. W. R. H.</p>																																																																													
<p>ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION</p>																																																																													
<table border="1"> <tr> <td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td><td>9</td><td>10</td><td>11</td><td>12</td><td>13</td><td>14</td><td>15</td><td>16</td><td>17</td><td>18</td><td>19</td><td>20</td><td>21</td><td>22</td><td>23</td><td>24</td><td>25</td><td>26</td> </tr> <tr> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> </table>																										1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26																										
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COMMON LITERATURE		PROCESSING AND PROPERTIES INDEX		COMMON LITERATURE INDEX	
<p>696. ISSLEDOVANIYA PO KHIMII PRIRODNUKH ASFAL'TOV (INVESTIGATIONS OF THE CHEMISTRY OF NATURAL ASPHALTS.) Uspenskii, V. A. and Gorakaya, A. I. (Moscow-Leningrad, 1941, 72pp. 2 rubles 25 kopeks)</p> <p>This publication is divided into two parts, the first deals with the experimental chemical examination of solid bitumens from the pre-Ural region, whilst the second is devoted to a discussion of the acidic components of solid bitumens.</p>					
<p>ASB.SLA. METALLURGICAL LITERATURE CLASSIFICATION</p>					
<p>23000 57000000</p>		<p>23000 57000000</p>		<p>23000 57000000</p>	
<p>23000 57000000</p>		<p>23000 57000000</p>		<p>23000 57000000</p>	

1ST AND 2ND COLUMNS		PROCESSES AND PROPERTIES INDEX		3RD AND 4TH COLUMNS	
F	J	<p>919. FORMATION OF ALGARITE AND PROCESS OF ANAEROBIC OXIDATION OF PETROLEUM. Uspenskiĭ, V. A., Gorakaya, A. I. and Karpova, I. P. (Izvest. Akad. Nauk S.S.S.R., Ser. Geol. (Bull. Acad. Sci. U.S.S.R., Ser. Geol.), 1947, (4), 89-106; Chem. Zentr. (Russian Zone Ed.), 1948, vol. 1, 890; abstr. in Chem. Abstr., 1950, vol. 44, 8096).</p> <p>Algarite is a peculiar substance, closely related to carbohydrates and proteins, which has been found in many paraffin-petroleum deposits. It is shown that algarite is a product of the bacterial decomposition of the paraffin hydrocarbons of petroleum and ozocerite. Algarite thus is a product of the later phases of the geochemical history of petroleum. The desulphurisation of petroleum is accompanied by the formation of certain hydrocarbons and protein-like substance by bacteria. Bacteria have been found in petroleum which are able to decompose proteins and hydrocarbons and form methane from them. These bacteria are considered to be closely connected with the process of algarite formation in petroleum. Decomposition of algarite by these bacteria results in the formation of methane.</p>			
ASB-51A METALLURGICAL LITERATURE CLASSIFICATION		B-1777777777			
FROM SYNOPSIS	FROM SUMMARY	FROM SUMMARY			
SYNOPSIS	SUMMARY	SUMMARY			

GORSKAYA, A.I.

VEBER, V.V., professor; GORSKAYA, A.I.; YEGOROV, Ye.N.; MANUCHAROVA, Ye.A.;
MESSINVA, M.A.; ~~REZHENKO~~, O.A.; REMEZOVA, T.S.; ROMM, I.I.;
SAVICH, V.G.; SHADOVSKIY, S.N.; UL'M, V.A.; FOKINA, N.I.; FORSH, T.B.;
SHABAROVA, N.T.; SHCHAPOVA, T.F.; KBERZIN, A.G.; YURKEVICH, I.A.

Results of the comprehensive study of contemporary analogues of oil-
bearing facies. Trudy VNIGI no.2:111-121 '51. (MLRA 10:4)
(Petroleum geology)

*1
manuscript
VNIGI*

BAKIROV, A.A., doktor nauk, redaktor; VASSOYEVICH, N.B., doktor nauk;
VEBER, V.V., doktor nauk; DVALI, M.F., doktor nauk; DOBRYANSKIY,
A.V., doktor nauk; MAYMIN, Z.L., doktor nauk; MIRCHINK, M.V.,
redaktor; ANDREYEV, P.F., kandidat nauk; AYZENSHTADT, G.Ye.,
kandidat nauk; BOGOMOLOVA, A.I., kandidat nauk; GORESKAYA, A.I.,
kandidat nauk; ZHABREV, D.V., kandidat nauk, redaktor; KAZMINA,
T.A., kandidat nauk; MESSINEVA, M.A., kandidat nauk, PETROVA,
Yu.N., kandidat nauk; RADCHENKO, O.A., kandidat nauk; TATARSKIY,
V.T., kandidat nauk; TIKHIY, V.N., kandidat nauk; USPENSKIY, V.A.,
kandidat nauk, DYAKOV, B.F., redaktor; SAVINA, Z.A., redaktor;
TROFIMOV, A.V., tekhnicheskii redaktor.

[Origin of oil] Preiskhozhdenie nefi. Pod red. M.F.Mirchinka i
dr. Moskva, Gos.nauchno-tekhn.isd-ve nefianoi i gerno-toplivnoi
lit-ry, 1955. 483 p. (MLRA 9:1)

1. Chlen korrespondent AN SSSR (for Mirchink)
(Petroleum geology)

"APPROVED FOR RELEASE: 08/25/2000

CIA-RDP86-00513R000516320016-7

GORSKAYA, A. I.

APPROVED FOR RELEASE: 08/25/2000

CIA-RDP86-00513R000516320016-7"

VEBER, V.V., professor; GINZBURG-KARAGICHEVA, T.L.; GLEBOVSKAYA, Ye.A.;
GORSKAYA, A.I.; ZAKHAROV, A.A.; MANUCHAROVA, Ye.A. [deceased];
MEKHTIYEVA, V.L.; ROMM, I.I.; SAVICH, V.G.; TALDYKINA, N.N.,
POKINA, N.I.; YURKOVICH, I.A.; MIRCHINK, M.F., professor, redaktor;
L'VOVA, L.A., redaktor; TROFIMOV, A.V., tekhnicheskij redaktor.

[Accumulation and transformation of organic substances in recent
sea sediments; in the light of the problem of oil origin] Nakoplenie
i preobrazovanie organicheskogo veshchestva v sovremennykh morskikh
osadkakh; v aspekte problemy proiskhozhdeniya nefti. Sbornik statei
pod red. M.F. Mirchink. Moskva, Gos. nauchno-tekhn. izd-vo neftianei
i gorno-toplivnei lit-ry, 1956. 342 p. (MLRA 9:6)

1. Vsesoyuznyy nauchno-issledovatel'skiy geologorazvedchnyy institut.
2. Chlen korrespondent AN SSSR (for Mirchink)
(Sapropelites) (Marine biology) (Petroleum geology)

USPENSKIY, Vladimir Alekseyevich; INDENBOM, Tanya Beynusovna; GORSKAYA,
A.I., red.; RAGINA, G.M., vedushchiy red.; YASHCHURZHINSKAYA,
A.B., tekhred.

[Volga-Ural oil-bearing area; geochemical characteristics of
petroleums and other bitumens] Volgo-Ural'skaia neftenosnaia oblast';
geokhimicheskaya kharakteristika neftei i drugikh bitumov. Lenin-
grad, Gos.nauchno tekhn. izd-vo neft. i gorno toplivnoi lit-ry.
1957, 302 p. (Vsesoiuznyi neftianoi nauchno-issledovatel'skii
geologorozvedochnyi institut. Trudy, no.107) (MIRA 12:7)
(Volga Valley--Petroleum) (Ural Mountain region--Petroleum)
(Ural Mountain region--Bitumen)

GORSKAYA A.I.

VEBER, V.V.; GORSKAYA, A.I.; GLEBOVSKAYA, Ye.A.

Hydrocarbons in Quaternary marine deposits. Geol. nefti 1 no.12:9-15
D '57. (MIRA 11:1)

1. Vsesoyuznyy nauchno-issledovatel'skiy geologo-razvedochnyy
neftyanoy institut.
(Hydrocarbons) (Petroleum in submerged lands)

GORSKAYA, A. I., SIMAKOVA, T. L., KOLESNIK, Z. A., MBOLOTSKAYA, O. P., SEMONOVA, N. I.
and STRIGALEVA, N. V.

"The Nature of Oil Changes in Anaerobic Conditions under the Influence of Biogenic Factors," p. 315-360 Voprosy obrazovaniya nefti, sbornik statey (Problems of the Origin of Petroleum, Collection of Articles) Leningrad, Gostoptekhizdat, 1958, 389p. Trudy, vyp. 128,

This book, containing four articles written by 11 specialists, reports on the results of studies made on the origin of oil deposits in the Northeastern Caucasus. The program was organized in 1950-55 by VNIGRI (All-Union Petroleum Sci. Res. Inst. for Geological Survey)

GORSEKAYA, A.I.; KOLESNIK, Z.A.; BOLOTSKAYA, O.P.

"Bitumen" formation during the decomposition of vegetable matter
by anaerobic microflora. Trudy VNIGRI no.123:98-102 '58.

(MIRA 11:12)

(Bitum) (Bacteria, Anaerobic)

SIMAKOVA, T.L.; GORSKAYA, A.I.; KOLESNIK, Z.A.; BOLOTSKAYA, O.P.;
SEMONOVA, N.I.; STRIGALEVA, N.V.

Change in petroleum effected by the biogenic factor under
anaerobic conditions. Trudy VNIIGRI no.128:315-362 '58.

(MIRA 11:12)

(Caucasus, Northern--Petroleum--Analysis) (Bacteria, Anaerobic)

3(8)

SOV/9-59-2-13-16

AUTHORS: Veber, V.V. and Gorskaya, A.I.

TITLE: The Azerbaydzhan Algarites (Ob al'garitakh Azerbaydzhana)
(Conclusion)

PERIODICAL: Geologiya nefti i gaza, 1959, Nr 2, pp 60-63 (USSR)

ABSTRACT: The peculiarity of the Kotur-Dag mud volcano in the South-Eastern part of the Caucasus is the continuous emission of breccia occurring simultaneously with gas emanation. In samples of breccia taken from the contact zone with the crater rim the formation of algarites on the surface of breccia fractures was observed and the material was subjected to analyses. The analysed material is considered to be a typical algarite-like secondary formation of carbohydrate character caused by bacterial activity. Microbiological analyses proved the existence of a facultative-anaerobic microflora. Comparative analyses of bitumen taken from the algarites and from breccia led to the conclusion that the breccia bitumen had a petroleum character and that the algarite bitumen was a modified kind of breccia bitumen with addition of new formations caused by bacterial activity. The authors admit the possibility that the algarites are products from destruc-

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The Azerba

Algarites

SOV/9-59-2-13-16

tion processes of paraffin hydrocarbons of oil but points to the probability that algarites can also be formed by bacteria using hydrocarbons only in the gaseous phase. The Kotur-Dag algarites are similar to the so called "paraffin dirt" found by American geologists.

There are 2 tables and 14 references, 7 of which are Soviet and 7 English

ASSOCIATIONS: VNIGNI, VNIGRI

Card 2/2

VERER, Vasilii Valerianovich; GORSKAYA, Aleksandra Ivanovna; GLEBOVSKAYA, Yekaterina Aleksandrovna; VERER, V.V., red.; KUZ'MINA, N.N., vedushchiy red.; POLOSINA, A.S., tekhn.red.

[Bitumen formation in Quaternary sediments and the genesis of petroleum] Bituminoobrazovanie v chetvertichnykh osadkakh i genesis nefiti. Moskva, Gos.nauchno-tekhn.isd-vo nefi. i gorno-toplivnoi lit-ry, 1960. 243 p. (MIRA 13:11)
(Petroleum geology)

GORSKAYA, A.I.; BOLOTSKAYA, O.P.; KITAYEVA, V.N.

Characteristics of organic matter from deposits of the ancient
Yoldian Sea. Trudy VNIGRI no.174:61-67 '61. (MIRA 14:11)
(Edov District--Clay)
(Bitumen)

VEBER, V.V.; GORSKAYA, A.I.

Bituminization in the sediments of carbonate facies. Sov. geol.
6 no.6:51-64 Je '63. (MIRA 16:7)

1. Vsesoyuznyy nauchno-issledovatel'skiy geologorazvedochnyy
neftyanoy institut i Vsesoyuznyy neftyanoy nauchno-issledovatel'skiy
geologorazvedochnyy institut.
(Bitumen-Geology) (Rocks, Carbonate)

VEBER, V. V.; GORSKAYA, A. I.

Bitumen formation in fresh water sediments. Geol. نفتي i
gaza 7 no.4:26-33 Ap '63. (MIRA 16:4)

1. Vsesoyuznyy nauchno-issledovatel'skiy geologorazvedochnyy
neftyanoy institut, Moskva, i Vsesoyuznyy neftyanoy nauchno-
issledovatel'skiy geologorazvedochnyy institut, Leningrad.

(Bitumen—Geology)

USPENSKIY, V.A.; RADCHENKO, O.A.; GLEBOVSKAYA, Ye.A.; GORSKAYA, A.I.;
SHISHKOVA, A.P.; PARPAROVA, G.M.; KOLOTOVA, L.P.; MEL'ITSANSKAYA,
T.N.; NERUCHEV, S.G., red.

[Principles of the genetic classification of bitumens]. Osnovy
geneticheskoi klassifikatsii bitumov. Leningrad, Nedra, 1964.
266 p. (Leningrad, Vsesoiuznyi neftianoi nauchno-issledovatel'-
skii geologorazvedochnyi institut. Trudy. no.230).

(MIRA 17:7)

GORSKAYA, F. M., Cand Vet Sci -- (diss) "Pathological anatomy
and certain problems of ^{the} pathogenesis of arsenic poisoning of
farm animals." Kazan', 1957. 20 pp (Min Agr USSR, Kazan'
State Vet Inst im N. E. Bauman), 100 copies (KL, 1-58, 120)

- 81 -

Country : USSR
Category : Diseases of Farm Animals. R
Toxicoses.
Abs. Jour : Ref Zhur-Biol., No 21, 1958, 97017
Author : Gorskaya, F. M.
Institut. : Kazan Institute of Veterinary Sciences.
Title : Pathomorphological Changes in Arsenic Poisoning
of Farm Animals.
Orig Pub. : Uch. zap. Kazansk. vet. in-ta, 1957, 65, 121-
133
Abstract : No abstract.

Card: 1/1

Inst : Kazan Veterinary Institute

GORSKAYA, I.A., KOTELNIKOVA, A. V., SOLOMATINA, V. V., (USSR)

"Changes in ATP and other Nucleotide Contents in
Rat Liver and Muscle in 2,4-Dinitrophenol Poisoning."

Report presented at the 5th Int'l. Biochemistry Congress,
Moscow, 10-16 Aug 1961.

KOTEL'NIKOVA, A.V.; SOLOMATINA, V.V.; GORSKAYA, I.A.

Adenosinephosphoric acid content of the rat liver and muscles in
dinitrophenol poisoning. Biokhimiia 25 no.6:1085-1091 N-D '61.
(MIRA 14:5)

1. Institute of Biochemistry, Academy of Sciences of the U.S.S.R.,
Moscow.

(PHENOL-TOXICOLOGY)
(LIVER)

(MUSCLES)
(ADENOSINEPHOSPHORIC ACIDS)

GORSKAYA, I.A.; KOTEL'NIKOVA, A.V.; DRIZOVSKAYA, S.Yu.

Coenzyme A content of various materials of microbiological and animal origin. Biokhimiia 29 no.3:566-569 My-Je '64. (MIRA 18:4)

1. Institut biokhimii imeni Bakha AN SSSR, Moskva.

GORSKAYA, I.A.; KOTEL'NIKOVA, A.V.; DRIZOVSKAYA, S.Yu.; SHOL'TS, Kh.F.

Study of the conditions of reduction of oxidized preparations of co-enzyme A. Biokhimiia 30 no.2:315-321 Mr-Apr '65. (MIRA 18:7)

1. Institut biokhimii imeni Bakha AN SSSR, Moskva.

ANDRIANOV, K.A., akademik; FEDIN, E.I.; KOTRELEV, G.V.; GORESKAYA, I.V.

High-resolution proton magnetic resonance of organocyclosilazanes.
Dokl. AN SSSR 163 no.4:877-879 Ag '65.

(MIRA 18:8)

1. Institut elementoorganicheskikh soedineniy AN SSSR.

SHAFR, V.Z., kand.khimicheskikh nauk; FREYDLIN, L.Kh., doktor khimicheskikh nauk; KHOL'MER, O.M., inzh.; LEBEDEV, I.M., inzh.; Prinimala uchastiye: GORSKAYA, L.A.

Obtaining ethyl ethers of pyrocatechin and resorcin from their phenolates and ethyl chloride. Masl.-zhir.prom. 28 no.4: 35-37 Ap '62. (MIRA 15:5)

1. Institut organicheskoy khimii AN SSSR imeni Zelinskogo (for Sharf, Freydlin). 2. Moskovskiy zavod "Slozhnyye efiry" (for Khol'mer, Lebedev).

(Ethers)

KLABUNOVSKIY, Ye.I.; BALANDIN, A.A.; MAMEDZADE, R.Yu.; ANTIK, L.V.;
GORSKAYA, L.A.

Dependence of polarographic characteristics on the structure
of quinones of the triptycene series. Izv. AN SSSR. Ser. khim.
no.8:1554 Ag '64. (MIRA 17:9)

1. Institut organicheskoy khimii im. N.D. Zelinskogo AN SSSR.

YAKERSON, V.I.; LAFER, L.I.; GORSKAYA, L.A.; RUBINSHTEYN, A.M.

Chromatographic study of physical and chemical adsorption of hydrocarbons on an aluminum-chromium-potassium catalyst. Izv. AN SSSR. Ser. khim. no.9:1725-1726 S '64. (MIRA 17:10)

1. Institut organicheskoy khimii im. N.D.Zelinskogo AN SSSR.

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6.4500

80128
S/141/59/002/06/009/024

AUTHORS: Aleksandrov, N.V., Gorskaya, L.B., Gershenzon, Ye.M.
and Etkin, V.S.

TITLE: Control of the Amplitude and Phase of an Electromagnetic Wave in a Waveguide by Means of Germanium Plate

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Radiofizika,
1959, Vol 2, Nr 6, pp 911 - 914 (USSR)

ABSTRACT: Experiments were conducted on phase and amplitude modulation of an electromagnetic wave incident on a germanium plate inside a waveguide by controlling the concentration of free-charge carriers in the germanium. The concentration of free-charge carriers changes the permittivity of the semiconductor, thus influencing the absorption of electromagnetic waves in the semiconductor. The control of concentration was achieved by using the Hall effect in a germanium plate having different velocities of recombination on its opposite surfaces. High-resistance (35 - 40 Ω .cm) antimony-alloyed n-type germanium was used. Concentration of free-charge carriers N was approximately 10^{14} per cm^3 ; permittivity was

Card1/3

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S/141/59/002/06/009/024

E310/E382

Control of the Amplitude and Phase of an Electromagnetic Wave
in a Waveguide by Means of Germanium Plate

approximately 16. By varying the electrical current flowing through the germanium plate, both the modulus and the phase of the reflection coefficient, as well as the phase of the passing wave, can be varied. In this way, a phase modulation can be achieved, the percentage of which for a given material depends upon the phase difference caused by reversal in current at a given current value. An audio-frequency generator and a pulse generator were used as signal sources. Modulation percentage was independent of the period of modulation voltage up to 0.1 μ s pulses. Efficiency of the modulator can be increased considerably by more careful treatment of the plate surfaces to increase the difference in the recombination rate on the surfaces. There are 4 figures and 11 references, 6 of which are English, 1 German and 4 Soviet. 4

Card2/3

80128

S/141/59/002/06/009/024

Control of the Amplitude and Phase of an Electromagnetic Wave
in a Waveguide by Means of Germanium Plate

ASSOCIATION: Moskovskiy pedagogicheskiy institut im. V.I. Lenina
(Moscow Pedagogical Institute imeni V.I. Lenin)

SUBMITTED: June 8, 1959

✓

Card 3/3

TINYAKOV, G.G.; GORSKAYA, L.F.

Variability of muscular tissue in a table salt solution.
Izv. vys. ucheb. zav.; pishch. tekhn. no.3:26-30 '58. (MIRA 11:9)

1. Moskovskiy tekhnologicheskiy institut myasnoy i molochnoy
promyshlennosti, Kafedra anatomii i gistologii sel'skokhozyaystven-
nykh zhivotnykh i Kafedra tekhnologii myasa.
(Meat--Preservation)

PROKOF'YEVA-BEL'GOVSKAYA, A.A.; GORSKAYA, L.F.; DUBININA, L.G.; YATROVA, G.V.

Radiation injury of chromosomes in the culture of embryonic
fibroblasts of man. Radiobiologiya 4 no.5:708-714 '64. (MIRA 18:4)

1. Institut biologicheskoy fiziki AN SSSR, Moskva.

9.2110

9.4300

24928

S/181/61/003/006/025/031
B102/B214

X

AUTHORS: Belova, A. P., Gorskaya, L. G., and Zakgeym, L. N.

TITLE: The electric properties of thin oxide layers on aluminum, tantalum, and zirconium

PERIODICAL: Fizika tverdogo tela, v. 3, no. 6, 1961, 1851 - 1858

TEXT: Rectifying metals with thin oxide layers in electrolytic cells have lately been investigated many times, partly because such oxide coated metals are finding more and more applications in radio engineering (e. g. construction of condensers), and partly because they exhibit interesting and often anomalous physical properties. The valve action and the asymmetry of the electric conduction have been investigated before for many systems including those in which an oxide semiconductor was used as the second electrode. The valve action has also been investigated repeatedly and different authors have made different assumptions about its origin, most of them assuming the appearance of a p - n junction. To learn more exactly the rectification mechanism and the asymmetry of the electric conduction the authors developed a new method for measuring the

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The electric properties...

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electrical characteristics of thin oxide layers on valve metals in cells where the second electrode is a metal. The subject to such investigations is the design of electrolyte - free condensers of small size having high capacities at low working voltages, a fine oxide layer serving as the dielectric. However, there are many difficulties in realizing this project. The method of the authors is the following: A foil of the valve metal is oxidized in an electrolytic cell; a plate of 6.5x6.5 mm is cut out and pasted on a ceramic plate having two silver grooves. The contact between the oxidized metal and a silver groove is accomplished by means of a conducting silver varnish. The second metal coating is a thin metal layer (e. g. Al) sputtered on to the oxide layer in vacuo. It is important to insulate the sputtered metal coating from the valve metal on the ceramic plate, which is accomplished by means of a "bridge" of insulating resin (see Fig. 1). Samples with oxide layers of Al_2O_3 , Ta_2O_5 , and ZrO_2 were prepared according to this method, the second electrode being Al in all cases. The temperature dependence of the capacity and of the loss angle at 1000 cps were measured for such samples. The capacity increases linearly with temperature for all the three oxides. The temperature

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The electric properties...

coefficient of the capacity for Ta_2O_5 was $250 \cdot 10^{-6} \text{ deg}^{-1}$ which agrees with the result of Sloan and Berry; the value for Al_2O_3 was $440 \cdot 10^{-6} \text{ deg}^{-1}$ and for ZrO_2 $310 \cdot 10^{-6} \text{ deg}^{-1}$. $\tan \delta$ for all the oxides at $20^\circ C$ was $5 \cdot 10^{-3}$ and increased exponentially with temperature. The $I(t)$ -diagram shows that the leakage current in the blocking (transmitting) direction decreased (increased) rapidly and after this remained independent of or slightly dependent on time. Fig. 3 shows for all the three samples the dependence of resistivity on the field strength, $\ln \rho = f(E)$; Fig. 4 shows $\ln \rho = f(1/T)$, where T is the absolute temperature. The table gives the resistivity values for $E = 50 \text{ kv/mm}$ of the oxide layers (1) in the blocking (A) and the transmitting (B) direction. The results obtained justify the assumption made by the authors that a p-i-n or ap-n junction is formed in the oxide layer or on the oxide - metal interface. Further studies in an electrolytic cell showed that there existed in fact a p-i-n junction with a thin p-type semiconducting layer on the side of the electrolyte and a thin n-type semiconducting layer on the side of the metal. These two layers are separated by the i-layer of the metal oxide which shows regular stoichiometric composition. Problems of the recti-

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fication mechanism are finally discussed. B. M. Tarayev and M. M. Lerner are mentioned. There are 5 figures, 1 table, and 14 references: 2 Soviet-bloc and 10 non-Soviet-bloc. The most important references to English-language publications read as follows: R. J. Taylor, H. E. Haring, Journ. of Electrochem. Soc., 103, 11, 611, 1956; 99, 1, 30, 1952; J. Sasaki, Phys. a. Chem. of Sol., 13, 3/4, 177, 1960; D. Sloan, H. Berry. Proc. IRE, 47, 6, 1070, 1959.

SUBMITTED: December 26, 1960 (initially),
January 24, 1961 (after revision)

Оксидный слой ①	20° C		100° C	
	запирающее напряжение A	проедающее напряжение B	запирающее напряжение A	проедающее напряжение B
Ti ₂ O ₃ ..	5 · 10 ¹³	1 · 10 ¹³	2 · 10 ¹⁴	7 · 10 ¹³
ZrO ₂ ..	7 · 10 ¹⁴	5 · 10 ¹⁴	1 · 10 ¹⁴	5 · 10 ¹²
Al ₂ O ₃ ..	7 · 10 ¹⁴	1 · 10 ¹⁴	6 · 10 ¹⁴	1 · 10 ¹²

Card 4/6

GORSKAYA, L. I.

YEROSHEVSKIY, T. I., GORSKAYA, L. I.

Penicillin therapy in diseases of the cornea and vascular tract.
Vest. oft. 29:6, Nov.-Dec. 50. p. 6-10

1. Of the Eye Clinic (Director -- Prof. T. I. Yeroshevskiy),
Stalingrad Medical Institute.

CHL 20, 3, March 1951

6/10/77 DATA, L 1

11/1/77

1/10/77 vinyl chloride plasticizer

1/10/77 vinyl chloride plasticizer

1/10/77 vinyl chloride plasticizer

1/10/77 vinyl chloride plasticizer

1/10/77 vinyl chloride plasticizer

1/10/77 vinyl chloride plasticizer

1/10/77 vinyl chloride plasticizer

LORATIN, P.V.; KATS, A.M.; YARANTSEVA, Ye.P.; FEDOROVA, T.M.; GORSKAYA, L.V.

Experimental study of the disinfection of prescriptions and paper
by means of ultraviolet irradiation. Apt. delo 14 no.6:60-64
N-D '65. (MIRA 18:12)

1. Farmatsevticheskiy fakul'tet I Moskovskogo ordena Lenina
meditsinskogo instituta imeni I.M.Sechenova; Nauchno-
issledovatel'skaya aptechnaya stantsiya Moskovskogo gorodskogo
aptekoupravleniya i Sanitarno-epidemiologicheskaya stantsiya
Moskvy.

GORSKAYA, N.F., inzh.; KARAVAYEV, I.I., kand.tekhn.nauk

Use of detergents for the cleaning of tank cars. Zhel. dor. transp.
43 no. 1:66-67 Ja '61. (MIRA 14:4)

(Tank cars—Cleaning)

KORAVAYEV, Ivan Ivanovich; GORSKAYA, Nina Fedorovna; FILLIPOVA, L.S.,
red.; BRAYLOVSKIY, N.G., red.

[Mechanized treatment of tank cars in washing and steaming
stations] Mekhanizirovannaya obrabotka tsistern na promyshleno-
proparochnykh stantsiyakh. Moskva, Izd-vo "Transport," 1964.
26 p. (MIRA 17:8)

GORSKAYA, N.G.

11(4)

p.3

PHASE I BOOK EXPLOITATION

SOV/1319

Akademiya nauk SSSR. Bashkirskiy filial

Khimiya sera-organicheskikh soedineniy, soderzhashchikhse v neft'yakh i nefteproduktakh; materialy II nauchnoy sessii (Chemistry of Sulfur-Organic Compounds Contained in Petroleum Products; Papers of the 2nd Scientific Session) v. 1. Ufa, Izd. Bashkirskogo filiala AN SSSR, 1958. 228 p. 1,500 copies printed.

Ed.: Sudarkina, K.I.; Editorial Board: Ayvazov, B.R., Mashkina, A.V., Obolentsev, R.D. (Resp. Ed.), Rozhdestvenskiy, V.P., and Shanin, L.L.; Tech. Ed.: Rakhimov, R. Sh.

PURPOSE: This book is intended for petroleum specialists of scientific research establishments, educational institutions, and petroleum refining plants.

COVERAGE: This collection is the first of a multivolume publication on the results of scientific research work carried out in the Soviet Union on the chemistry and technology of sulfur- and nitrogen-organic compounds during the period 1954-1955; and according to a coordinated research project outlined in 1956 by the sponsoring agency (Bashkir Branch, AS USSR).

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Chemistry of Sulfur-Organic Compounds (Cont.)

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agency (Bashkir Branch of the Academy of Sciences USSR). Along with the 22 reports published herein, abridged versions of questions, answers and discussions are given wherever the editors deem it expedient.

TABLE OF CONTENTS:

From the Editors	3
Opening Address by the Head of the Chemistry Department of the Bashkir Branch of the Academy of Sciences, USSR, Professor R.D. Obolentsev	5
The author states that three-quarters of the petroleum drilling in the USSR is concentrated in eastern ("yuekavkazskiy" - outside the Caucasus) oil fields; that these deposits are sulfurous; and that research on the exploitation of these deposits is insufficient.	
Obolentsev, R.D. Sulfur-Organic Compounds of Petroleum Origin	8
This article points out the need for a new process of directly distilling sulfurous petroleum, which process, it is stated, may be based on the thermostability of sulfur-organic compounds.	
Obolentsev, R.D., and B.V. Ayvazov, Cyclic Sulfides in the Kerosene Distillate of Petroleum From the Carboniferous Deposits of Tuzmazy Oilfields	19

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Chemistry of Sulfur-Organic Compounds (Cont.)

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Sulfur-organic compounds were separated from kerosene fractions of petroleum and physical constants (including molecular formulas, refractive indices, etc.) were determined corresponding to mono-, bi- and tricyclic sulfides. Experimental data on the fractional distillation of these compounds (which vaporized at 209-210° C) compared with known data identified them as 3-butylthiophenes [tetrahydro 3-butylthiophenes]. A.D. Biktasheva and N.S. Lyubopytova carried out the spectrographic analyses.

Ivanova, N.M., Ch. Kh. Mirkhaydarova, and Ya. I. Nel'kenbaum (Ishimbayskiy neftepererabatyvayushchiy zavod--Ishimbay Oil Refining Plant) Installation for Chromatographic Separation of Sulfur-Containing Compounds From Petroleum Distillates

29

Illustrations, schematic diagrams of apparatus and a table of data are given for the chromatographic analysis of the sulfur content of Ishimbay petroleum after pyrolysis.

Gorskaya, N.G. (Novo-Ufimskiy neftepererabatyvayushchiy zavod -- New Oil Refining Plant at Ufa) On the Problem of Constructing Larger Chromatographic Installations for Separating Concentrates of Sulfur-Organic Compounds From Petroleum Products

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Chemistry of Sulfur-Organic Compounds (Cont.)

80V/1319

Ten tons of petroleum material with a sulfur content of 0.15 percent was processed by the chromatographic method with a separation yield of 70 percent concentration of sulfur-organic compounds amounting to 80 liters after 9 months (approximately) of continuous operation.

✓ Skripnik, Ye. I. (Kuybyshevskiy industrial'nyy institut -- Kuybyshev Industrial Institute). Thermal Stability of Sulfur-Organic Compounds of Sulfur-bearing Petroleum From Kuybyshevskaya Oblast'

43

According to the author, Kuybyshevskaya oblast' ranks third in extracting and refining petroleum in the Soviet Union during the Sixth Five Year Plan. Separation of sulfur-organic compounds from the highly sulfurous petroleum of this region (3-4.5 percent; tar - up to 22 percent; and in asphalt-tar - up to 100 percent S) was accomplished by two methods; 1) decomposition of complex sulfur-organic compounds 2) reaction of elementary sulfur with hydrocarbons. The first process took place at 350° C and gave maximum sulfur-compound formation at 400° C and higher. The second process took place at 180 - 220° C with a high yield of sulfur compounds. Tabular results of these processes are given.

Obolentsev, R.D. and B.V. Ayvazov. Thermal Stability of Sulfur-Organic Compounds Contained in Petroleum From the Tuzmazy Oilfield

51

Card 4/15

POSSKAYA, N. M.

Synthesis of esters of lignoceric alcohol and lignoceric acid. M. Khabenskii and N. M. Posskaya, Pharm. Inst. Leningrad; *Zhur. Obshch. Khim.* 21, 1077 (1958), of C.A. 49, 6288c. - Heating 1 mole lignoceric alcohol with 4 moles carboxylic acid in the presence of 2 moles H_2SO_4 for 10 hrs. gave the following lignoceryl esters: laurate, m. 44-8°; myristate, m. 81-2°; palmitate, m. 80-1° and stearate, m. 79-80°. The acid and Ag_2O gave the acetate, m. 67-4°. Lignoceric acid and 4 moles H_2SO_4 in $CHCl_3$ at 140° gave the *ethylene di*lignocerate, m. 44-45°; in Me_2CO , m. 79-81° (from $CHCl_3$); similarly, from 1 mole of the glycerol triolignocerate, m. 73-5° (from Me_2CO) and from $CHCl_3$.

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APPROVED FOR RELEASE: 08/25/2000

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S/258/62/002/002/007/018
1028/1228

26.7181

AUTHOR:

Kosterin, S. I., Koshmarov, Yu. A. and Gorskaya, N. M. (Moscow)

TITLE:

Experimental investigation of the heat exchange of a plane plate in a supersonic rarefied gas stream

PERIODICAL: Inzhenernyy zhurnal, v. 2, no. 2, 1962, 263-269

TEXT: The paper presents the results of an experimental investigation of the heat transfer of a plane plate wetted by a supersonic rarefied gas stream under a zero angle of attack. The investigation was designed in view of the fact that the intermediate region of flow of gases, lying between the continuum region and the free-molecule region, had not been studied sufficiently, and that the various approximation methods used to determine heat exchange in this region needed a careful experimental check. The supersonic stream was created by means of a nozzle of variable shape, and its plane isentropic nucleus, of dimensions 30×30 mm, was used in the experiments. (The air was heated before entering the nozzle in the experiments on heat exchange). Silver or copper plates of different dimensions were used, their thickness being such that the ratio of the thickness to the mean free path was 0.11-0.05. The temperature at the center of the plates was measured by a thermocouple. The parameters of the gas stream were also measured. The recovery factor, the temperature of recovery, and the coefficient of heat transfer were determined. The range of variation of the parameters during the experiments

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Experimental investigation of...

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was : $M = 2.6 - 3.2$, $Re = 20 - 240$. Results are compared with the results obtained from different theoretical formulas based on the continuum model. No theoretical solution is found to be satisfactory. There are 5 figures. The most important English-language reference are as follows: Schaaf, S. A. Theoretical Considerations in Rarefied Gas Dynamics. Heat transfer... a Symposium, Univ. Michigan Engng. Res. Inst. Bull., 1953

SUBMITTED: November 22, 1961

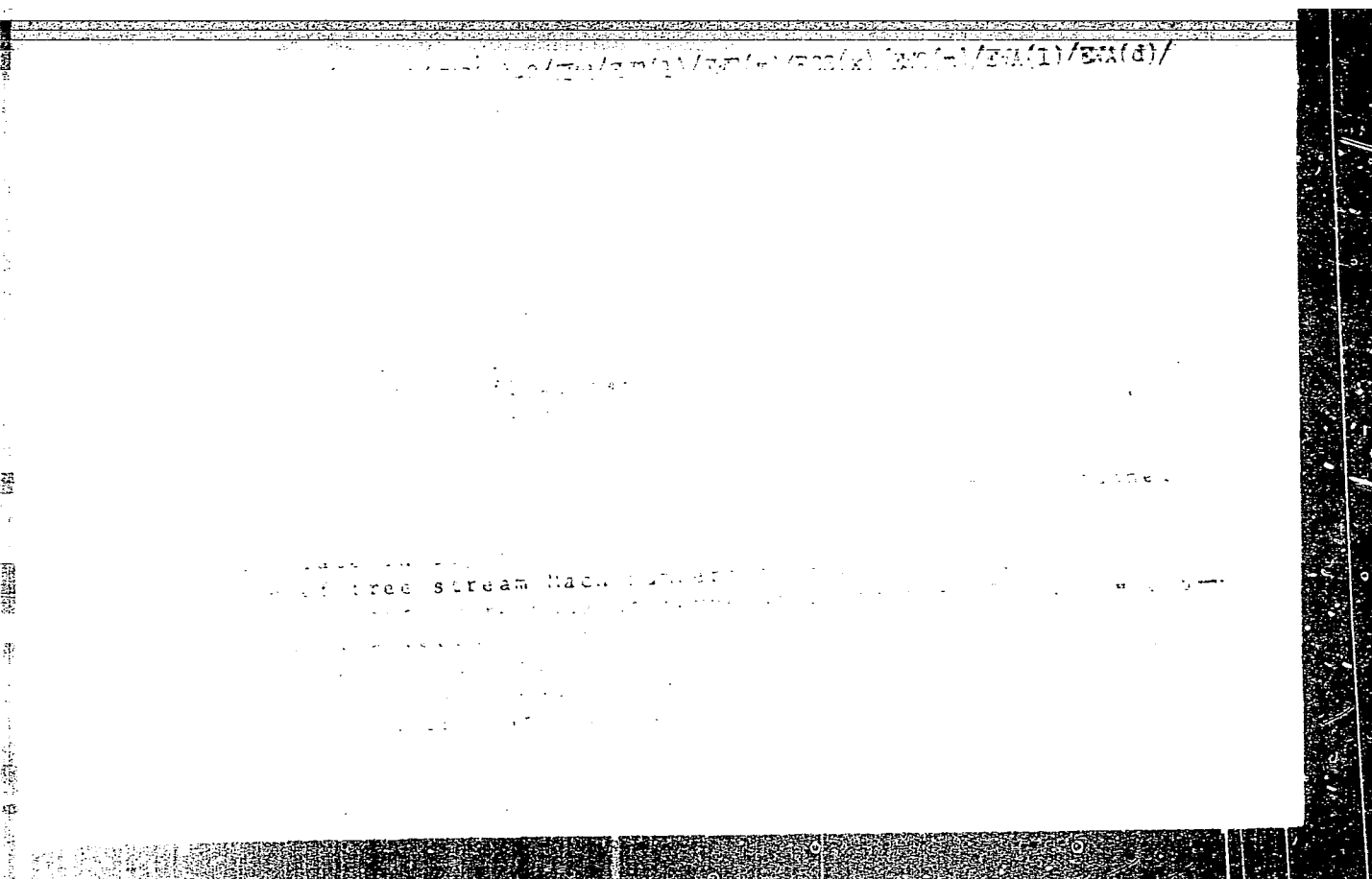
Card 2/2

X

GORSKAYA, N.M.; KOSTERIN, S.I.; KOSHMAROV, YU.A. (Moscow):

"Convective heat transfer on a plate in a supersonic rarefied gas flow".

report presented at the 2nd All-Union Congress on Theoretical and Applied Mechanics, Moscow, 29 Jan - 5 Feb 64.



NO REF SOV: 008

OTHER: 004

L 16160-66 EWT(1)/EWP(m)/EWP(w)/ETC(F)/EPF(n)-2/EWG(m)/EWI(d)/FCS(k)/EWA(1)
ACC NR: AT6006910 WW/EM/CS SOURCE CODE: UR/0000/65/000/000/0170/0188

AUTHOR: Koshmarov, Yu. A.; Gorskaya, N. M.

ORG: Institute of Mechanics, AN SSSR, Moscow (Institut mekhaniki AN SSSR)

TITLE: ^{21, 41, 5} Heat transfer to a flat plate in supersonic rarefied air flows ^{1, 55}

SOURCE: Teplo- i massoperenos. t. II: Teplo- i massoperenos pri vzaimodeystvii
tel s potokami zhidkostey i gazov (Heat and mass transfer. v. 2: Heat and mass
transfer in the interaction of bodies with liquid and gas flows). Minsk, Nauka i
tekhnika, 1965, 170-188

TOPIC TAGS: aerodynamics, thermodynamics, heat transfer, supersonic flow, hyper-
sonic flow, rarefied gas, heat transfer coefficient, molecular interaction

ABSTRACT: An investigation was conducted in a vacuum aerodynamic tunnel described
previously (Yu. A. Koshmarov, Same source, p. 157; S. I. Kosterin, Yu. A. Koshmarov,
N. M. Gorskaya, Inzhenernyy zhurnal, v. 2, no. 2, 1962.) to determine heat transfer
and equilibrium temperatures of a flat plate in supersonic rarefied air flows at
zero angle of attack. The supersonic flow of Mach 4 to 9 was produced by one ex-
pansible and three conical nozzles. Twelve model plates were used for investigat-

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ing the average heat transfer coefficient and average equilibrium temperatures, which were determined by the method used by Kosterin, Koshmarov, and Gorskaya in the study cited above. Comparison of measured heat fluxes with the relations obtained by A. Oppenheim (Mekhanika, no. 5, 1953) for free molecular flow made it possible to evaluate the values of the accommodation coefficient. Measurements of local heat transfer coefficients were made in the Mach range from 3.8 to 8.1, with temperature ratios $T_w/T_0 = 0.62$ to 0.83 , and with the interaction parameter χ ranging from 4 to 26.2 . The minimum and maximum values of the rarefaction parameter \sqrt{Re}/M_∞ were 2.5 and 4, respectively, while the Knudsen number varied from 4.2 to 1.2. Average equilibrium temperatures were measured in the Mach range from 2.5 to 8.9, with the rarefaction parameter varying from 1.3 to 8, and maximum and minimum values of the interaction parameter of about 40 and 1.5, respectively. The average value of the Knudsen number was about 0.7—0.8. Average heat transfer coefficients were investigated in the Mach range from 2.6 to 9, with temperature ratios $T_w/T_0 = 0.56$ — 0.83 , rarefaction parameters χ 0.7 to 5, and interaction parameters from 3 to 49. Discrepancies between experimental and theoretical data were observed. Their magnitude increased with decreasing values of the rarefaction parameter and their sign depends on the Mach number, that is, the experimental results were smaller at low M and higher at high values M than the theoretical data. A detailed analysis of the results presented in graphs and tabular form

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ACC NR: AT6006910

shows that, in general, the experimental results agree well with the conclusions of Koshmarov's approximate theoretical analysis (Same source, p. 157). Orig. art. has: 7 figures, 11 formulae, and 1 table. [AB]

SUB CODE: 20/ SUBM DATE: 09Nov65/ ORIG REF: 009/ OTH REF: 004/ ATD PRESS:

4204

Card 3/3

L 43830-66 EWT(1)/EWP(m) WW

ACC NR: AP6030120

SOURCE CODE: UR/0421/66/000/004/0175/0177

AUTHOR: Koshmarov, Yu. A. (Moscow); Gorokhova, N. M. (Moscow)

69
B

ORG: none

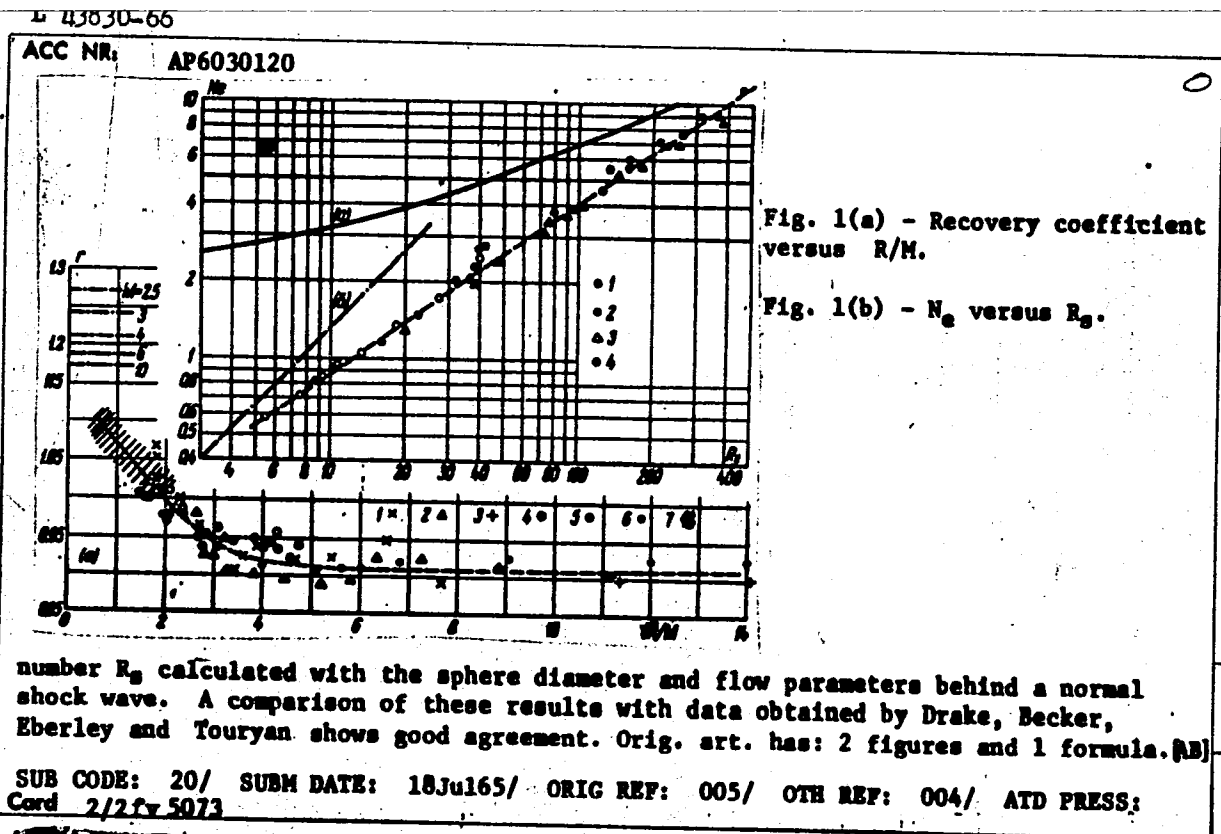
TITLE: Heat transfer and equilibrium temperature of a sphere in a supersonic rarefied gas flow

SOURCE: AN SSSR. Izvestiya. Mekhanika zhidkosti i gaza, no. 4, 1966, 175-177

TOPIC TAGS: supersonic aerodynamics, supersonic flow, hypersonic flow, aerodynamic heat transfer, heat transfer coefficient, rarefied gas, *HEAT TRANSFER IN RAREFIED GAS*

ABSTRACT: Results of experimental investigations of the heat transfer and equilibrium temperature of a sphere in supersonic rarefied air flows are presented and the experimental setup and measuring techniques are described. The experiments were carried out with four spheres of electrolytic copper from 2.9 to 19.75 mm in diameter in a low-density wind tunnel. The experiments associated with investigation of the equilibrium temperature were separated into three groups according to Mach number: 1 - $M = 2.25$ to 2.6 ; 2 - 5.5 to 6.25 ; 3 - 7.5 to 8 with the results presented in Fig. 1(a) as the dependence of the recovery coefficient r on \sqrt{R}/M . The investigations of heat transfer were carried out in the Mach range from 6.2 to 6.35 and the results are presented in Fig. 1(b) as the dependence of the Nusselt number Ne on the Reynolds

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GORSHAYA, N. S. (Cand Tech. Sci.) (at IAT), PETROV, V. V. (Cand. Tech. Sci)

"Principle of action, constructive fulfilment and results of theoretical and experimental research on fast-moving electro-pneumatic servo-mechanisms."

paper read at the Session of the Acad. Sci. USSR, on Scientific Problems of Automatic Production, 15-20 October 1956.
Automatika i telemekhanika, No. 2, p. 182-192, 1957.

9015229

AUTHOR: Gorskaya, M. S. (Moscow) 103-19-5-4/14

TITLE: The Influence Exerted by the Zone of Linearity and the Regions of Saturation Upon the Dynamics of a Two-Cascade Servomechanism (Vliyaniye zony lineynosti i uchastkov nasyshcheniya na dinamiku dvukhkaskadnogo servomekhanizma)

PERIODICAL: Avtomatika i Telemekhanika, 1958, Vol. 19, Nr 5: pp. 418-434 (USSR)

ABSTRACT: A characteristic of the servomotor, more typical than in references 4 and 5, is investigated here. It is expressed by a nonlinear function with zones of linearity and regions of saturation. From a technical point of view the problem here consists of the obtaining of recommendations for a rational design of the two-cascade servo-mechanism which is schematically represented here. From a mathematical point of view the problem consists of the investigation of the system in the presence of a relay characteristic with loop and a nonlinear characteristic with zones of linearity and saturation. This makes it possible to compare the influence of the linearity zones ϕ_{linear} and

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The Influence Exerted by the Zone of Linearity and
the **Regions** of Saturation Upon the Dynamics of a
Two-Cascade Servomechanism

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of the insensitiveness regions μ_{ξ} upon the stability of the system and upon its self-oscillations. A compressed-air hydraulic servomechanism (References 4-6) may serve as an example for a servomechanism of the type investigated here. - The investigations are performed according to the point-transformation method. The nonlinear problem on the influence of the characteristic with the linear zone and the regions of saturation in the second cascade upon the free oscillations of the servomechanism is entirely investigated. The analytical formulae for the critical values of the fundamental servomechanism parameters are given. On the basis of the performed investigations the following is found: 1) In the presence of a relay characteristic with a loop in the first amplification cascade and a nonlinear characteristic with zones of linearity and saturation in the second amplification cascade the two-cascade servomechanism has two critical parameter ratios. If the width of the linear zone is

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the Regions of Saturation Upon the Dynamics of a
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$$\varphi_{\text{linear}} > \frac{2\mu_{\text{e}}}{\tau}$$

the critical parameter ratio has the same shape as in
reference 5. But if the width of the linear zone is

$$\varphi_{\text{linear}} < \frac{2\mu_{\text{e}}}{\tau}$$

the critical ratio has the form of (20). 2) The presence
of a nonlinear characteristic with saturation in the se-
cond cascade leads to the essential difference of the dy-
namics of such a servomechanism as compared to the dyna-
mics of a servomechanism with a purely linear control ele-
ment in the second cascade (Reference 5) or with a relay
element with a zone of insensitiveness (Reference 4). -

3) If the system at a given slope of the linear part of
the characteristic of the control element, possesses
self-oscillations exceeding this zone, the amplitude of

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the Regions of Saturation Upon the Dynamics of a
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self-oscillation will be smaller than in the case of a merely linear characteristic. This is explained by the fact that the slope of the characteristic decreases with an increase in the φ -coordinate. The introduction of saturation regions into the characteristic of the control element of the second cascade leads to a reduction of the critical magnitude of the zone of insensitiveness, in case that the linear zone was selected according to the condition:

$$\varphi_{\text{linear}} < \frac{2\mu\epsilon}{\tau}$$

4) The critical parameter ratio for the case $\varphi_{\text{linear}} = \frac{2\mu\epsilon}{\tau}$

which is determined by (20) has the following shape:

$$e^{-\frac{\Delta}{\tau}} \varphi_{\text{linear}} = e^{-\varphi_{\text{linear}}} e^{\frac{2\mu\epsilon}{\tau}}$$

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the Regions of Saturation Upon the Dynamics of a
Two-Cascade Servomechanism

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It is shown that the zone of linearity narrows the region of self-oscillations in the case of values of the zone of insensitiveness of the first cascade $\mu_{\xi} > 0,04$. When $\mu_{\xi} < 0,04$, the zone of linearity in the second cascade widens the region of self-oscillation in comparison to the region of self-oscillation in the case of a zone of insensitiveness ξ . The work was performed under the direction of V. V. Petrov denotes the relative magnitude of the zone of insensitiveness. ξ_{linear} denotes the relative quantity of the linearity zone of the relay:

$\tau = \frac{T_1}{T}$, T_1 denotes response time of the impulse in the first amplification cascade, T_2 - the reduced time of the servomotor. Δ - denotes the relative quantity of the play in the feedback.

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. The Influence Exerted by the Zone of Linearity and
the Regions of Saturation Upon the Dynamics of a
Two-Cascade Servomechanism

103-19-5-4/14

There are 10 figures and 6 references, all of which are
Soviet.

SUBMITTED: March 28, 1957

AVAILABLE: Library of Congress

1. Servomechanisms--Design
2. Servomechanisms--Stability
3. Servomotor--Analysis

Card 6/6

AUTHOR: Gorskaya, N.S. (Moscow)

103-19-6-3/13

TITLE: The Dynamics of an Electric Relay Servomechanism With a Load Changing Proportionally to Motion (Dinamika releynogo elektricheskogo servomekhanizma pri nagruzke, izmenyayushcheysoya proporsional'no khodu)

PERIODICAL: Avtomatika i telemekhanika, 1958, Vol 19, Nr 6, PP 540 - 557 (USSR)

ABSTRACT: The present work was performed under the direction of B.N. Petrov and V.V. Petrov. The author was advised by N.A. Fufayev. The dynamics of an electric servomechanism is on several assumptions investigated here. Thus the investigation deals with a nonlinear system the motion of which is described by a complete second-order differential equation if the right part is a relay-function which expresses a characteristic with a loop and a zone of insensitiveness. According to the method of point transformation (Reference 1) a complete solution of the problem is given here: 1) The structure of the splitting up of the phase-plane into trajectories is investigated. 2) The distribution of the parameter-space to domains of different qualitative behavior of the system, i.e., to the domains corresponding to the

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a Load Changing Proportionally to Motion

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presence or the absence of self-oscillations in the servomechanism is found. 3) Analytical expressions of the critical ratios among the parameters of the servomechanism are obtained. 4) The stability of the periodical solutions is investigated. On the basis of the investigations the following is stated: 1) In a relay-servomechanism the motion of which is expressed by a complete second-order differential equation with a right part in the form of a relay-function which corresponds to a characteristic with a loop and a zone of insensitiveness two different critical parameter ratios exist: in the case of high load-formula (28) and in the case of small load-formula (35). The system is characterized by three parameters γ , μ_ϵ , Δ , γ denotes the load factor, μ_ϵ the zone of insensitiveness, Δ the width of the loop of the control element. 2) From the distribution of the parameter $(\gamma, \Delta, \mu_\epsilon)$ -space (usually $|\mu_\epsilon \pm \frac{\Delta}{2}| < \frac{1}{\gamma}$) to domains of a different qualitative behavior of the system follows that the load changing proportionally to

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The Dynamics of an Electric Relay Servomechanism With
a Load Changing Proportionally to Motion

103-19-6-3/13

motion is beneficial to the occurrence of self-oscillations
in the system. There are 11 figures and 8 references, 5 of
which are Soviet.

SUBMITTED: July 4, 1957

1. Electric relays--Applications 2. Electric
servomechanisms--Theory

Card 3/3

PHASE I BOOK EXPLOITATION

SCV/3754

Gorskaya, Nina Sergeyevna, Inessa Nikolayevna Krutova, and Vladislav Yul'yevich Rutkovskiy

Dinamika nelineynykh servomekhanizmov (Dynamics of Nonlinear Servomechanisms)
Moscow, AN SSSR, 1959. 318 p. Errata slip inserted. 3,300 copies printed.

Sponsoring Agency: Akademiya nauk SSSR. Institut avtomatiki i telemekhaniki.

Ed.: B.N. Petrov, Corresponding Member, Academy of Sciences USSR

Ed. of Publishing House: Ye. N. Grigor'yev; Tech. Ed.: P.S. Kashina.

PURPOSE: This monograph is intended for scientific workers and engineers studying or designing automatic control systems and their components. Ch. II is of special interest to persons studying the phase plane method and the method of point transformations.

COVERAGE: The monograph examines certain specific types of electropneumatic, hydraulic, and electric servomechanisms in order to investigate the dynamics of nonlinear servomechanisms on the basis of the method of phase space and of the

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Dynamics of Nonlinear Servomechanisms

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theory of point transformations. Section 1 of Ch. I, Ch. IV, and sections 4-6 of Ch. VII were written by N.S. Gorskaya; Ch. III and VI, and sections 2-5 of Ch. I by I.N. Krutova; and Ch. II and V, and sections 1-3 of Ch. VII by V.Yu. Rutovskiy. The authors thank N. A. Furayev and V.V. Petrov. There are 130 references: 100 Soviet, 24 English, 3 German, and 3 French.

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B007/B011

AUTHOR: Gorskaya, N. S. (Moscow)

TITLE: Effect of Speed Coupling on the Dynamics of a Relay
Servosystem With Load

PERIODICAL: Avtomatika i telemekhanika, 1960, Vol. 21, No. 5,
pp. 601 - 614

TEXT: An electric servosystem is used in automatic control systems in which a special relay circuit is used to change the direction of rotation from 24 to 48 v by switching over the feed voltage of the motor with separate excitation. In order to reduce the static error caused by friction, the servosystem is constructed in the form of an oscillating system. Oscillations are caused due to the unsymmetrical characteristic of the control relay which has a normally closed contact. Fig. 1 shows the circuit diagram of a servosystem with rigid and speed feedback. It is described here. The servosystem is schematically shown in Fig. 4, and the respective formula (9) is derived. It is shown that the

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linear part of the servosystem is expressed by a complete equation of the 2nd order. The structure of the phase space is investigated, for which purpose formula (9) is transformed into (11). It can be seen therefrom that the phase space of the system investigated is a double-folium phase plane. In folium 1 the motion of the system is expressed by differential equations, formula (12), and in folium 2 by formula (2). The problem in finding the bordering cycles and the investigation of the decomposition of the phase space is shown to consist in the investigation of the point transformation of the straight line L (Fig. 5) into itself (Ref. 1). Both foliums of the phase plane, namely, for the case of a low damping and for that of a strong damping, are investigated. The diagrams of point transformation are shown in Figs. 9 and 10. It can be seen therefrom that there always exists a stable bordering cycle, i. e., that oscillations are always present in the system. The dependence of the amplitude and time of the half-periods of oscillations on the system parameters, among them also on the coefficient of the speed feedback, is determined: formulas (18), (19), (20) and (21). Summing up: If there is a loop in the relay characteristic of the control member, the servosystem with load whose linear part is described by a com-

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plete equation of the 2nd order tends toward the oscillating state with arbitrary, constructionally admissible parameters of the servosystem. N. A. Fufayev and A. S. Alekseyev assisted the author in perusing the manuscript. There are 10 figures and 8 references: 5 Soviet, 2 German, and 1 English.

SUBMITTED: May 28, 1959

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GORDEYEV, G.S., prof.; YAKUSHKIN, D.I.. Prinimali uchastiye: GORSKAYA, N.V.; GRANOVSKAYA, A.Ye.; YEVSTIGNEYEVA, Yu.G.; KRYLOV, M.V.; LEYKIN, D.I.; MAKHOVETSKIY, V.B.; MEYENDORF, A.L.; NAZARENKO, V.I.; NICHIPORUK, O.K.; PAVLOV, L.I.; RUMYANTSEVA, N.V.; SOSENSKIY, I.I.; CHERNEVSKIY, Yu.V.. TULUPNIKOV, A.I., red.; SOLOV'YEV, A.V., prof., red.; RAKITINA, Ye.D., red.; ZUBRILINA, Z.P., tekhn.red.

[Agriculture in capitalist countries; a statistical manual] Sel'skoe khoziaistvo kapitalisticheskikh stran; statisticheskiy sbornik. Moskva, Gos.izd-vo sel'khoz.lit-ry, 1958. 247 p. (MIRA 12:5)

1. Moscow. Vsesoyuznyy nauchno-issledovatel'skiy institut ekonomiki sel'skogo khozyaystva. 2. Otdel nauchnoy informatsii po ekonomike i organizatsii sel'skogo khozyaystva zarubezhnykh stran Vsesoyuznogo nauchno-issledovatel'skogo instituta ekonomiki sel'skogo khozyaystva (for all except Tulupnikov, Solov'yev, Rakitina, Zubrilina). 3. Direktor Vsesoyuznogo nauchno-issledovatel'skogo instituta ekonomiki sel'skogo khozyaystva (for Tulupnikov). 4. Zamestitel' direktora Vsesoyuznogo nauchno-issledovatel'skogo instituta ekonomiki sel'skogo khozyaystva (for Solov'yev).

(Agriculture--Statistics)

COUNTRY : USSR
CATEGORY : Farm Animals.
The Swine.
ABS. JOUR. : RZhBiol., No. 3, 1959, No. 12052
AUTHOR : Nazarenko, I. I., Gorskaya, M. V.
INST. : Institute of Agricultural Information.
TITLE : Testing Sire-Boars and Sows according to Their
Progeny in Denmark (A Review).
ORIG. PUB. : Sb. in-ta s.-kh. inform., 1958, No 5, 30-36
ABSTRACT : No abstract.

CARD: 1/1

L 35328-66 EWT(m)/ENF(j) RM
ACC NR: AP6026835

SOURCE CODE: UR/0020/66/166/002/0349/0352

AUTHOR: Andrianov, K.A. (Academician); Fedin, E.I.; Lavygin, I.A.; Gorskaya, N.V.;
Lavrukhin, B.D.

ORG: Institute of Organoelemental Compounds, AN SSSR (Institut elementoorganicheskikh
soyedineniy AN SSSR)

TITLE: Reaction of 8-hydroxyquinoline tributoxytitanium with triethyl hydroxysilane

SOURCE: AN SSSR. Doklady, v. 166, no. 2, 1966, 349-352

TOPIC TAGS: spectrometer, reaction mechanism, titanium compound, silane, esterifica-
tion; chemical stability

ABSTRACT: A nuclear magnetic resonance spectrometer was used for studying the
mechanism of the reaction between 8-hydroxyquinoline tributoxytitanium and
triethyl hydroxysilane. Spectra are given for various reagent concentrations.
The first event in the reaction is apparently coordination of the oxygen in
the hydroxyl radical of the triethyl hydroxysilane with a titanium atom
which results in transesterification by the mechanism of bimolecular
nucleophilic substitution. Substitution of a single butoxyl group probably
results in such an unstable molecule that disproportionation takes place
with the formation of stable compounds having tetravalent and hexaco-
ordinate saturated titanium atoms. The experimental procedure is described.

Orig. art. has: 1 figure and 1 table. JPRS: 36, 4557
SUB CODE: 07 / SUBM DATE: 21Jul65 / ORIG REF: 002

UDC: 546.824

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ACC NR: AP7003534

SOURCE CODE: UR/0386/67/005/001/0016/0017

AUTHOR: Fedin, E. I.; Gorskaya, N. V.

ORG: Institute of Organoelemental Compounds, Academy of Sciences SSSR (Institut elementoorganicheskikh soyedineniy Akademii nauk SSSR)

TITLE: Irreversibility of transition of NMR signals through a weak field in some molecular crystals

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki. Pis'ma v redaktsiyu. Prilozheniye, v. 5, no. 1, 1967, 16-17

TOPIC TAGS: nuclear magnetic resonance, naphthalene, anthracene, spin relaxation, spin system, spin lattice relaxation

ABSTRACT: The authors performed an experiment with naphthalene single crystals, similar to the experiment of R. V. Pound (Phys. Rev. v. 81, 156, 1951), wherein the sample was demagnetized in a weak (terrestrial) field. Unlike the earlier results, which showed reversibility of the transition through a weak field and demonstrated the existence of a spin temperature in LiF crystals, in naphthalene the transition through the weak field turned out to be irreversible for the NMR signal: a time $t \approx 1$ sec turned out to be sufficient for total disorientation of the nuclear spins in these crystals; subsequent establishment of the equilibrium magnetization and a corresponding growth of the NMR signal occurred, as in the initial magnetization, with a time constant $\tau \sim 10^3$ sec. Neither variation of the intensity of the rf field

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over a wide range, nor defects in the crystal lattice, have any influence on this effect. The behavior of the NMR signal in anthracene and biphenyl was similar. Control experiments with molecular crystals and polymers whose molecules contain no closed electron delocalization loops or have additional intramolecular degrees of freedom (paradichlorobenzene, hexamethylbenzene, oxyacetate of beryllium, paraffin, polyethylene, etc.) disclosed full reversibility of the transition of the NMR signal through a weak field. This irreversibility is qualitatively treated as an indication that in the tested naphthalene, biphenyl, and anthracene, energy is effectively pumped out from the nuclear-spin system into the lattice when $H < H_{loc}$. A theoretical and experimental study of this effect is being continued. The authors thank A. I. Kitaygorodskiy for continuous interest, A. P. Amiton, B. A. Kvasov, N. O. Okulevich, and N. I. Okhlobystin for help with the measurements, and R. M. Myasnikov and L. A. Fedorov for supplying the samples.

SUB CODE: 20/ SUBM DATE: 01Oct66 OTH REF: 003

Co:d 2/2

GORESKAYA, R.V.; YARYM-AGAYEVA, N.T.

Photometric determination of small amounts of pyridine.
Zhur. anal. khim. 20 no.6:760-761 '65.

(MIRA 18:7)

1. Nauchno-issledovatel'skiy institut fiziologii truda, Donetsk.

Gorskaya, S.V.

ANTIBIOTICS

"Synthetic Medium for the Culture of Streptomyces Globisporus Streptomycini of the Strain LS-1", by V.A. Severin, and S.V. Gorskaya, All-Union Scientific Research Institute of Antibiotics, Antibiotiki, No 2, March-April 1957, pp 26-32

Streptomyces globisporus streptomycini, which produces Streptomycin, is capable of growing, developing, and producing an antibiotic in nutrient media of various compositions; however, the most effective media have proved to be those containing corn extract and soya flour.

For intricate biochemical analysis, however, the authors found the synthetic seeding medium to be the most convenient. Consequently, a medium was developed consisting of : ammonium sulfate 0.4%; glucose 2-2.5%; lactic acid 0.6%; sodium bicarbonate 1% (or anhydrous 0.35%); sodium chloride 0.2%; mono-potassium phosphate 0.05%; ferrous sulfate ($\text{FeSO}_4 \cdot 7\text{H}_2\text{O}$) - 0.005%; manganese sulfate ($\text{MnSO}_4 \cdot 7\text{H}_2\text{O}$) - 0.005%; magnesium sulfate ($\text{MgSO}_4 \cdot 7\text{H}_2\text{O}$) - 0.01%; and zinc sulfate ($\text{ZnSO}_4 \cdot 7\text{H}_2\text{O}$) - 0.001%.

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This synthetic nutrient medium insured both stability and a favorable course of fermentation, as well as an output of 800 to 1000 units/ml., and over.

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SEVERINA, V.A., GRACHEVA, I.V., GORSKAYA, S.V.

AMINO NITROGEN BALANCE AND METABOLISM IN ACTINOMYCES STREPTOMYCINI
during growth and development [with summary in English]. Vop.med.
khim. 4 no.6:455-463 N-D '58 (MIRA 12:1)

1. All-Union Research Institute of Antibiotics, Moscow.
(ACTINOMYCES, metab.
amino nitrogen in Actinomyces streptomycini (Rus))
(NITROGEN, metab.
same (Rus))

SEVERIN, V.A.; GORSKAYA, S.V.

Method for working with the cultivated mycelium of a streptomycin-producing organism. Antibiotiki, 4 no.2:5-9 Mr-Apr '59. (MIRA 12:7)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut antibiotikov.
(STREPTOMYCES, culture
cultivation of streptomycin producing strain (Rns))

SEVERINA, V.A.; GORSKAYA, S.V.; GRACHEVA, I.V.

Studies on the role of amino acids in streptomycin synthesis. Vop.
med.khim. 5 no.6:448-457 N-D '59. (MIRA 13:3)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut antibiotikov, Moskva.
(STREPTOMYCIN chem.)
(AMINO ACIDS chem.)

17(2,3)

SOV/20-126-5-54/69

AUTHORS: Severina, V. A., Gorskaya, S. V., Gracheva, I. V.

TITLE: Effect of Amides on the Biosynthesis of Streptomycin (Vliyanie amidov na biosintez streptomitsina)

PERIODICAL: Doklady Akademii nauk SSSR, 1959, Vol 126, Nr 5, pp 1103 - 1106 (USSR)

ABSTRACT: It was previously proved that various amino acids such as glycine, α -alanine, valine, arginine, histidine, lysine, isoleucine and phenyl-alanine, stimulate the streptomycin formation both in the usual fermentation of the actinomycetes on a simple synthetic medium, and in severe experiments with cultivated mycelium. Various other amino acids do not show this effect, while others (cystine and tryptophane) suppress the formation of streptomycin. Most of the stimulating amino acids disappear from the nutrient medium after 40-48 hours. Ammonia is formed due to a desamination of the α -amino group; besides, arginine serves as an ammonia source on account of the arginase- and urease-activity of the actinomycetes. As is known, the streptomycin molecule, namely its streptobiosamine part, contains methyl-glucosamine. There are publication references on a role

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of the glutamine in the glucosamine synthesis by transamination (Refs 1-3), in which glutamine acts as a distributor of the amino group. Under these points of view, the streptomycin producer was struck with the idea investigating this process. . . . Asparagine and the genus IS-1 were first used for this purpose. For the method of cultivation, see reference 4. A culture without amide served as control. Table 1 shows that the activity of the culture-liquid increased by 25-40% as compared with the control. Further 13 severe, even more accurate, experiments have shown (Table 2) that the said increase may even attain 60%. Thus, asparagine takes part in the streptomycin synthesis. Further experiments, with and without glucose, have shown (Table 3) that glucose raises considerably the yield of streptomycin; thus, according to an opinion uttered, asparagine has something to do with the formation of glucosamine. The control of the glucose consumption showed (Figs 1 a,b) that, in the presence of asparagine, the decrease of the glucose is higher than in the control. No spot of any amino acid could be ascertained chromatographically (Fig 2: 1-5). The disappearance of the amide strip speaks for a utilization of the nutrient by the fungus. A further task would be the testing of the effect of glutamine on the processes

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Effect of Amides on the Biosynthesis of Streptomycin SOV/20-126-5-54/69

in question. This could further clarify the mechanism of participation of the said amides in the building-up of the antibiotic molecule. There are 4 figures, 4 tables, and 4 references, 1 of which is Soviet.

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy institut antibiotikov
(All-Union Scientific Research Institute for Antibiotics)

PRESENTED: March 19, 1959, by V. N. Shaposhnikov, Academician

SUBMITTED: March 10, 1959

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SEVERIN, V.A.; GORSKAYA, S.V.

Synthesis of streptomycin in enriched synthetic media. Antibiotiki
5 no. 5:21-25 8-0 '60. (MIRA 13:10)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut antibiotikov.
(STREPTOMYCIN)

SEVERINA, V.A.; GORSKAYA, S.V.; GRACHEVA, I.V.

Role of amides in the biosynthesis of streptomycin. Vop.
med. khim. 7 no.4:425-433 J1-Ag '61. (MIRA 15:3)

1. The All-Union Research Institute of Antibiotics, Moscow.
(STREPTOMYCIN) (AMIDES)

GORSKAYA, S. V., GRACHEVA, I. V., and SEVERIN, V. A. (USSR)

"Amides in the Biosynthesis of Streptomycin and Glucosamines."

Report presented at the 5th International Biochemistry Congress,
Moscow, 10-16 Aug 1961

GORSKAYA, S.V.; ORLOVA, N.V.

Congress on antibiotics in Prague. Antibiotiki 9 no.11:1028-
1036 N '64. (MIRA 18:3)

SEVERINA, V.A.; GORSKAYA, S.V.; GRACHEVA, I.V.

Effect of cycloserine on the biosynthesis of glucosamine
and streptomycin. Dokl. AN SSSR 154 no.4:960 F '64.

(MIRA 17:3)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut antibioti-
kov. Predstavleno akademikom A.N. Belozerskim.

GORSKAYA, T.S.

Motion picture on meadow and pasture grasses. Zemledelie 23 no.1:
93-94 Ja '61. (MIRA 13:12)

1. Starshiy agronom Glavnoy inspeksii po zemledeliyu Ministerstva
sel'skogo khozyaystva SSSR.

(Pastures and meadows)

(Motion pictures in agriculture)

GORSKAYA, T.V.

Great revolutionary democrat V.G. Belinskii as an educator
of the young generation. Nauch. trudy LTA no.99:193-200 '62.
(MIRA 17:1)

KONDRAT'YIVA, G.P.; GORSKAYA, V.I.

Treating diphyllbothriasis at home. Med.paraz. i paraz.bol.
28 no.2:236 Mr-Apr '59. (MIRA 12:6)

1. Iz Estonskoy respublikanskoy sanitarno-epidemiologicheskoy
stantsii.

(TAPWORMS)